DOCUMENT RESUME

ED 395 427 EC 304 821

AUTHOR Dev, Poonam C.; Belfiore, Phillip J.
TITLE Mainstreaming Students with Disabilities: Teacher Perspectives in India.
PUB DATE Apr 96
NOTE 29p.; Paper presented at the Annual International Convention of the Council for Exceptional Children (74th, Orlando, FL, April 1-5, 1996).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Disabilities; Educational Practices; Elementary School Teachers; Elementary Secondary Education; Foreign Countries; *Inclusive Schools; Learning Disabilities; Mainstreaming; Mental Retardation; Physical Disabilities; Secondary School Teachers; *Student Placement; *Teacher Attitudes
IDENTIFIERS *India (New Delhi)

ABSTRACT

This study surveyed general education teachers in four private elementary/secondary schools in New Delhi, India, concerning their attitudes toward mainstreaming students with mild to severe disabilities and factors that teachers considered essential for successful mainstreaming. The 98-item survey elicited 32 responses. Results are discussed in terms of the attitudes of the teachers about educating students with three types of disabilities--physical disabilities, mental disabilities, and learning disabilities. More than 78 percent of respondents expressed a willingness to educate students with disabilities in their classrooms. However, 60 percent of the teachers felt that separate classes were better for students with disabilities. Teacher recommendations were organized into nine categories: (1) creating awareness, (2) early identification, (3) placement issues, (4) academic issues, (5) curriculum adaptations, (6) structural and technological adaptations, (7) social-emotional aspects, (8) parental involvement, and (9) training and administrative support. Almost all teachers felt that teaching students with disabilities required more patience, that teaching styles must be modified, and that consultation with a special educator is necessary. Specific survey responses are appended. (Contains 42 references.) (DB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 395 427

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Running Head: Mainstreaming in India

Mainstreaming Students With Disabilities:

Teacher Perspectives in India.

Poonam C. Dev

Phillip J. Belfiore

Purdue University

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
P. Dev
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Address: Poonam C. Dev, Department of Educational Studies, LAEB, Purdue University, West Lafayette, IN 47907

EC 304821

BEST COPY AVAILABLE

Abstract

Students with disabilities have shown great benefits by being educated in the same setting as their nondisabled peers (Brady, Swank, Taylor, & Freiberg, 1992; Wang & Baker, 1985-86). Mainstreaming of students with disabilities ranging from mild to severe can be influenced by the attitudes of the teachers in the general education setting both in (Bacon & Schulz, 1991; Bishop,1986; Center & Ward, 1987; Coates, 1989) and outside (Berge & Berge, 1988; Center & Ward, 1987; Winzer & Rose, 1986) the United States of America. This research was designed to assess the attitudes of general educators at the elementary, secondary, and high school levels in private schools in the Indian capital, New Delhi. The results are discussed in terms of the attitudes of general education teachers about educating students with three types of disabilities - physical handicaps, mental handicaps, and learning disabilities, and the instructional and curricular adaptations suggested by the teachers. Of the teachers who responded, more than 78% expressed a willingness to educate students with disabilities in their classrooms. However, 60% of the teachers were of the opinion that separate classes were better for students with disabilities.

Introduction

The implementation of Public Law (P.L.) 94-142 two decades ago ensured free, publicly supported, educational opportunities for all handicapped children in the United States (US). Mainstreaming students with special needs in the regular classroom has generally had positive academic and social outcomes for the students with, as well as without, disabilities (Blackman, 1989; Garvar-Pinhas & Schmelkin, 1989; Madden & Slavin, 1983; Reynolds & Reynolds, 1982; Zigmond & Baker, 1990). (For a more detailed review of research on academic and social outcomes of mainstreaming students with mild disabilities, read Madden & Slavin, 1983.) Every country in the world probably has children with special needs, but not all countries have implemented such laws to provide for their educational needs. Nor do all of them have a standardized means of identifying children with different types of disabilities. Therefore no accurate documentation exists as to the percentage of the population which could be identified as benefitting from special services, and as a result are likely to be in dire need of related support services. India is, unfortunately, one such country. There are also no educational programs at the University level to train teachers specifically for the education of students with learning and other disabilities. Students working towards a teaching certificate in some major Universities have the option to select an introductory course in Special Education as one of the courses in their plan of study, but such courses are not required. The result is teachers who may be willing, but lack the necessary training, to meet the needs of any child with learning or other disabilities, who may be in their classroom. Students with motor, sensory and neurological disabilities are generally taught in special schools, like the Spastics Society of India, and the Blind School, run with the help of

Government funds in part, but mostly with the generosity of philanthropists, private donors, and volunteers. These schools conduct their own training programs for teachers. Few students from these special settings are mainstreamed in local schools. Most of those students who are, usually join regular private schools at the high school stage - Grade 11.

Before the advent of P.L. 94-142 in the US, students with special needs were being educated in a variety of settings - resource rooms, special schools, residential institutions, home schools, and self-contained classrooms, among others. During the time efforts were being made to provide free, appropriate education for students with special needs, educators and researchers were concerned about the efficacy of separating students with special needs from their nondisabled peers during the time they spent in school (Hamre-Nietupski, McDonald, & Nietupski, 1994; Zigmond & Baker, 1990). Mainstreaming was supported by P.L. 94-142, and the regular classroom was defined as the least restrictive environment for students with mild disabilities (Coates, 1989; Hasazi, Johnston, Liggett, & Schattman, 1994; McLeskey & Pacchiano, 1994; Wang, Vaughn, & Dytman, 1985; Williams, 1990). With an emphasis on including students with learning and other disabilities in the regular classroom, came the question of teacher preparation and attitudes. What are the fears and concerns of general education teachers about including students with special needs in their classrooms? Do they need administrative support? More resources? Special training? Are they skeptical about the benefits of mainstreaming these students?

Researchers have attempted to answer these questions in a number of ways, some results being more conclusive than others. The academic achievement of the student with special needs has been found to be significantly influenced by the attitudes of the educators toward the child with

disabilities as well as toward the concept of mainstreaming (Coates, 1989; Gans, 1985; Larrivee & Cook, 1979; Myles & Simpson, 1992; Rojewski & Pollard, 1993).

Mainstreaming and the General Educator

Mainstreaming has been found to affect not only the students concerned, but also the teachers involved. Semmel, Abernathy, Butera, and Lesar (1991) concluded from a survey of 381 special and general educators, that teachers were generally in favor of mainstreaming students with disabilities. In a meta-analysis done by Wang and Baker (1985-86), the results supported the hypothesis that mainstreamed students with disabilities benefit a great deal both academically as well as socially. In some instances, positive attitudes toward mainstreaming were found to decrease as the grade level increased (Winzer & Rose, 1986).

There were also studies where teachers have expressed negative attitudes toward mainstreaming students with disabilities (Garvar-Pinhas & Schmelkin, 1989; Gickling and Theobald, 1975; Shotel, Iano, & McGettigan, 1972; Zigmond, Levin, & Laurie, 1985). The amount of training and preparation to meet the needs of students with disabilities was found to have a great impact on the attitudes of general educators toward mainstreaming (Garvar-Pinhas & Schmelkin, 1989; Leyser, 1988; Stephens & Braun, 1980; Whinnery, Fuchs, & Fuchs, 1991; Williams, 1990). Teachers who had no contact with a child with any type of a disability, nor any form of training in special education, were less likely, than those who have, to feel confident in dealing with such students in their classrooms on their own. Regular educators who were hesitant about espousing the benefits of mainstreaming, perceived themselves as lacking in the training and skills necessary to help students with disabilities achieve success in the mainstreamed setting (Berge & Berge, 1988;

Center & Ward, 1987; Kemple, Hartle, Correa, & Fox, 1994; Rojewski & Pollard, 1993; Schmelkin, 1981; Wolery, Huffman, Holcombe, Martin, Brookfield, Schroeder, & Venn, 1994). Teachers who had some background or training in special education were likely to feel more confident to deal competently with the students with special needs in their classrooms (Clark, 1976; Larrivee & Cook, 1979; Leyser, 1988; Stephens & Braun, 1980; Wang, Vaughn, & Dytman, 1985; Whinnery, Fuchs, & Fuchs, 1991). Research has shown a significant association between the amount of experience with children with disabilities and a positive attitude toward mainstreaming (Hayes & Gunn, 1988; Horne, 1983; Larrivee & Cook, 1979; Reynolds & Reynolds, 1982).

Some researchers have found that teachers may be opposed to mainstreaming students with disabilities without adequate support from special educators (Center & Ward, 1987; Coates, 1989; Gans, 1985; Shotel, Iano, & McGettigan, 1972), or without modifications and adaptations in the instructional design (Bacon & Schulz, 1991; Bishop, 1986; Center & Ward, 1987; Fuchs, Fuchs, Hamlett, & Phillips, 1994; Shotel et al., 1972; Schumm and Vaughn, 1991). In a study conducted by Ysseldyke, Thurlow, Wotruba, and Nania (1988), most of the elementary teachers, rather than the secondary teachers desired additional adult help in the classroom. A survey of 194 general education teachers in a midwestern public school district revealed a general willingness to accept students with learning disabilities (LD) and behavior disorders in regular education settings, contingent upon appropriate modifications (Myles & Simpson, 1992). The results of the data also suggested that teachers preferred to participate in the mainstreaming decisions. However, not all teachers have had to make adaptations or modifications for the student with special needs (Zigmond, Levin, and Laurie, 1985).

This study was conducted to determine the attitudes of general education teachers in a number of [1]private schools in New Delhi, the capital of India, toward mainstreaming students with disabilities ranging from mild to severe. Data were collected through a questionnaire sent out to the teachers of private schools in New Delhi. The results of the survey will be used to make a case for Governmental support of Special Education courses for teachers and other professionals at major Universities in India, beginning with Delhi University. Therefore the purpose of this study was two-fold: (a) to investigate the attitudes of teachers toward mainstreaming students with disabilities, and (b) to identify some of the factors which could help educators and administrators make mainstreaming a success for students with special needs in India.

Methodology

For the purposes of this study, the term "special needs" was used to mean a disability (mental, physical or neurological), and "mainstreaming" was defined as the integration of students with special needs into general education classrooms for some part of each school day. This definition of mainstreaming was based on the "least restrictive" mandate of Public Law 94-142, also known as the Education for All Handicapped Children Act of 1975 (changed to the Individuals with Disabilities Education Act of 1990).

---

[1] Only private schools were chosen for this study mainly due to the language factor. Most teachers in private schools know English, whereas very few teachers in public schools are fluent in English. Also, the school system in India is quite different to that in the USA. There is a wide gap in almost all areas of teacher education, as well as in the quality and quantity of material and personnel resources available to public and private schools.

Sample

Questionnaires were distributed to general education teachers in four private schools in New Delhi, India. All the target schools were in the same school district, all of them generally used standard English as the medium of instruction, all four of the selected schools had an enrollment of more than 1500 students (K-12), and all of them had mainstreaming to varying degrees. However, only one of these schools, managed by the Indian Air Force, elected to participate in this research. The Air Force Golden Jubilee Institute had an enrollment of about 1800, which included 120 students with disabilities. There were 90 general education teachers employed to teach Kindergarten through Grade 12, and this school had been mainstreaming students with disabilities since 1986. The data collector visited the school personally, and handed out 76 questionnaires to randomly selected teachers. Of these, 42% were duly completed and returned. The survey elicited 32 responses in all: 22% elementary (Grades 1-5) teachers, 31% secondary (Grades 6-8) teachers, 19% high school (Grades 9-12) teachers, and 28% taught grades 7 through 12. The demographic summary of the sample population as salient to the present study is described in Table 1.

Insert Table 1 about here

Procedure

A survey questionnaire in standard English was designed specifically for the present study. The instrument contained 98 items designed by the first author to assess the teachers' attitudes toward mainstreaming students with mild and severe disabilities, and to identify the factors

considered essential for successful mainstreaming. The teachers were asked to respond to 97 items on a 5-point Likert scale, with 1 corresponding to "strongly agree" and 5 corresponding to "strongly disagree". The questions were divided into two major categories: attitudes toward mainstreaming, and estimation of skills and resources needed. Some examples of the survey items are: (1) The needs of students with disabilities can best be served through special, separate classes, and (2) To be able to help students with disabilities in the general education setting, all teachers must have some training in special education: In addition to the Likert scale, one open-ended query was included in the survey. (A copy of the questionnaire may be obtained upon request from the first author.) The respondents were asked to indicate what they thought should be done to help seriously underachieving students to improve academically.

The Principals of the target schools were visited personally by the data collectors, and given questionnaires for each of the teachers involved in this study. The questionnaires, along with a cover letter explaining the purpose of the study, were then distributed to the teachers. The cover letter accompanying each questionnaire clarified the anonymous nature of the survey.To maintain anonymity, filling out the name and address section of the questionnaire was kept optional. Respondents were asked to mail the questionnaire back in a return-addressed, stamped envelope within two weeks from the date of dispatch. Principals of the schools which had not responded by then were contacted once by telephone. After another two-weeks' waiting period, only the surveys acquired were included in the study. Using nonparametric statistical procedures, the percentage of each type of response was calculated (see Table 2).

Results

The respondents were mostly female, their years of teaching experience ranged from six months to 27 years, the average being 9.5 years, and the grade levels taught by them ranged from Kindergarten to Grade 12. All the respondents were general education teachers, but had direct contact with one or more student with disabilities on a regular basis. The school which participated in this research practiced mainstreaming, where the students with disabilities spent a part of each school day in general education settings. More than 75% of their day was spent in the resource room.

Results are discussed in terms of the responses according to the type of disability of the student - physical handicaps, mental handicaps, and learning disabilities. These results are based on the rated-response and open-ended sections of the survey.

Open-ended Question

The responses to the question "What do you think should be done to help the students in your class(es) who are far below average?" are divided into nine categories:

A. Creating awareness.

The respondents expressed a need to create public awareness about the needs and characteristics of students with disabilities. They emphasized the importance of involving non-disabled peers in teaching students with disabilities.

B. Identification.

The teachers felt that before any intervention is undertaken, the types and levels of disabilities should be identified, and as early as possible. Some of the respondents suggested that

the students with disabilities be encouraged to talk to the rest of the class about their needs and abilities.

C. Placement issues.

Almost all the respondents felt that students with disabilities should be grouped according their academic performance and ability level, rather than according to their age. The teachers were generally of the opinion that students with disabilities should be segregated and "given special attention". Students with LD who are placed in regular education settings, should be in smaller classes to help the teacher spend adequate amounts of time with each student.

D. Academic issues.

According to some of the respondents, "the performance of slow learners further deteriorates when they are forced to learn through a foreign language, e.g. English". Peer mediation was suggested by some of the teachers, to help the student with disabilities progress academically. The respondents felt that the quality of education should not be inferior for the student with disabilities. Instead, extra help should be provided by the teacher, in and out of class, and the student should be taught in his/her native language if required. However, about 3% of the respondents disagreed, and felt that extra help after school hour would be too exhausting for both the student as well as the teacher. They also suggested following a variety of grading and assessment policies, based on each student's needs and abilities. Some of the respondents suggested using rewards to help motivate students with disabilities, others stressed the need to consult special educators for strategies to promote effective mainstreaming. More than half the respondents felt

that perental involvement was essential to help the student with disabilities succeed in a general education setting.

E. Curriculum adaptations.

Suggestions by the respondents ranged from allowing extra time for tasks, to setting different tasks for students with disabilities. Some of them felt that the curriculum for students with disabilities should place more emphasis on vocational training and sports, rather than on academic learning. The teachers were of the opinion that basic skills, and general learning should be tackled before any specialized topic, e.g. geometry, was considered. They emphasized the teaching of basic listening, thinking, speaking, and reading skills. They expressed a need to reduce the teacher's load of administrative paper-work "done to satisfy the school inspectors", so that they could devote more time to the students with special needs in their classes.

F. Structural and technological adaptations.

Classrooms should be equipped with suitable furniture, and helping aids. Teachers should be provided with audio-visual equipment, and other special teaching materials to meet the needs of students with disabilities in their classes.

G. Social-emotional aspects.

The respondents stressed the importance of helping students with disabilities develop and maintain self-esteem. They suggested that the teachers be encouraging and supportive at all times, and set an example for the rest of the students to follow. The teachers suggested that patience, understanding, and a positive attitude be used to motivate and guide the students with disabilities.

However, students should also be disciplined when required. The students without disabilities should be encouraged to help boost the confidence and self-esteem of their peers with disabilities.

H. Parental involvement.

Parents of "slow learners" should attend orientation programs so that they not only accept the limitations of their children but "stop expecting brilliant academic performance from their wards". The teachers emphasized the need to keep in close contact with the parents of students with disabilities, to develop a better understanding of the academic as well as social needs of the students. The parents and teachers need to interact on a regular basis and at frequent intervals.

I. Training and administrative support.

Administrative help and support was seen to be one of the most important factors affecting successful mainstreaming. The respondents felt that the building principal's cooperation would go a long way in improving the support required for the mainstreaming process. The teachers wanted the principal to provide adequate training and personnel support to make mainstreaming effective. More than 50% of the respondents stressed the need for the presence of a special educator in the building to help meet the needs of students with disabilities in mainstreamed settings. Financial and/or other incentives, and in-service training were considered to be the responsibility of the administrators of each school.

Attitudes Toward Mainstreaming

More than 78% of the teachers in India who participated in this study were willing to mainstream students with disabilities. However, only after undergoing training in special education. At the time the survey was administered, only 28% of the respondents were willing to educate

students with disabilities in their classrooms, 26% were undecided, and 46% expressed an unwillingness to mainstream students with disabilities in their general education classes. The majority, about 60%, were in favor of separate classes for students with disabilities (see Table 2).

Insert Table 2 about here

Estimation of Skills and Resources Needed

An overwhelming number, more than 90%, of the respondents were of the opinion that teachers require more patience to teach students with disabilities, than to educate their non-disabled peers (see Table 3). All the respondents agreed that teaching styles have to be modified for students with mental handicaps, and that these students would also require special equipment in the classroom. More than 95% of the teachers who participated in this study agreed that consultation with a special educator is required for effective mainstreaming, and more than 84% felt that to make mainstreaming a success, administrative help is essential (see Table 3). Although 31% of the teachers who participated in this survey felt that teachers as well as administrators must be involved to make mainstreaming a success, only 17% agreed that more awareness was needed about special education in India, and 41% felt that Delhi has enough special educators. However, 69% of the respondents agreed that training in special education is a requirement for effective mainstreaming, and 44% felt that they were insufficiently trained for educating students with special needs.

Insert Table 3 about here

Discussion

Demographic Information

The purposes of this study were to: (a) investigate the attitudes of teachers toward mainstreaming students with disabilities, and (b) identify some of the factors which could help educators and administrators make mainstreaming a success for students with special needs in India. The teachers who responded to the survey were mostly female (81%), and most of them (53%) had a Master's degree. Almost three-fourths of the respondents had taught for 6 years or more, only about 22% taught elementary school, and more than 77% taught one or more grade levels between Grades 7 and 12.

Opinions About Mainstreaming

Most of the teachers concurred on the benefits of mainstreaming on students with disabilities, especially in regards to their adjustment in society after leaving school. The majority (more than 78%) were also willing to mainstream these students, but only after adequate training. Although less than 44% of the teachers felt that they were sufficiently trained to meet the needs of students with disabilities, only about 31% were of the opinion that training in special education would give them more confidence in educating these students.

Adaptations for Effective Mainstreaming

An overwhelming majority of the respondents (about 91%) felt that teachers would require more patience to teach students with disabilities in the general education setting. All the teachers agreed that special equipment and modification in teaching styles would be required to mainstream students with mental handicaps. More than 97% of the teachers were of the opinion that a special education consultant is required for successful mainstreaming. Overall, most of the teachers agreed that curriculum content and grading policies would have to be adapted for students with disabilities in their classrooms. Almost 86% of the teachers felt that administrative help is required if mainstreaming is to be successful.

Responses to Open-ended Question

Several key areas of importance emerged as teachers responded to the open-ended question, "What do you think should be done to help the students in your class(es) who are far below average?". A majority of responses centered on the need to focus on educational issues of (a) intervention and (b) curriculum adaptations. Overall, the recommendations for intervention focused on "additional" or "specialized" services. More specifically, intervention recommendation of peer tutoring, additional coaching, technologies, and small group instruction were all stated several times. Except for peer tutoring, no other recommendations centered around the ideas of instruction in a least restrictive, or inclusive, environment.

Overall, recommendations for curriculum adaptations suggested (a) a separate or alternative curriculum, and (b) general curriculum delivery. Curriculum areas identified included vocational, games, sports, and crafts and arts. Others suggested not only a separate curriculum, but that the

curriculum also be "watered down" so as to require less effort, less time, and less complexity for the students concerned. General curriculum delivery included game playing, puppet and music, extra time, enhanced technologies, individualization, and breaking down tasks into smaller parts. Little emphasis was placed in functionality, age-appropriatness, and adaptations made to the existing curriculum. As in the area of instruction, little or no emphasis was placed on strategies that allowed for increased integration or inclusion.

Although such instructional and curricular consideration as inclusion, integration, community-based, functionality, and same-age, which are keys to the education of students with special needs in the United States, were not priorities of the respondents to this survey, the survey did indicate a willingness to provide individualized education services. No responses were recorded that suggested exclusion, institutionalization, or uneducability. In light of the lack of formal teacher training programs in the areas of special education, teachers expressed a willingness and openness to educate students with special needs in classroom situations.

Research Limitations

This study has certain limitations which need to be considered while interpreting the results. Although diverse, the sample population was not chosen at random, but selected on the basis of their fluency in English, and the level of cooperation estimated. The data were collected only from one city, albeit the capital of the nation. There is also a possibility of an idiosyncratic interpretation of one or more items in the questionnaire, since English is learned as a second language in India. The cultural, linguistic, and/or educational background of the teachers might have influenced their response to one or more items on the survey. In spite of these limitations, the results of this research

can be used to contribute to the current mainstreaming debate. This study helps add to the global perspective of the attitudes of general education teachers toward the concept of mainstreaming.

Conclusions

Mainstreaming should not be considered a magic formula to help students with disabilities achieve instant success, but as a model for providing special services for as many students with special needs as possible (Gickling & Theobald, 1975). Since the teachers surveyed for this study had no formal training in special education, their attitudes expressed might change after training and guidance. There is a dire need to construct a bridge between segregated and regular classrooms in the school systems within and outside the US. One possible way is to staff regular classrooms with teachers trained to deal with the special needs of each individual child. Another possibility is to provide educators and administrators with trained support personnel with a background in the specific disability of the student to be mainstreamed. Also, the educators and administrators are encouraged to be guided by the outcomes of special education intervention policies and procedures in countries like the US, and avoid the pitfalls. They should study the history of special education environments, so that they may realize the drawbacks of separating students with disabilities from their nondisabled peers. The current political, economic, and social climate of India, and the educational system prevailing in most of the states, will have to be studied in depth before any practical strategies and policy changes involving mainstreaming can be implemented. With information obtained directly from some of the people concerned, surveys can be used to make policy and plan programs (Fink & Kosecoff, 1985). This study was a start in that direction.

Acknowledgements: The authors wish to express their gratitude to Anjana N. Dev for all the time and effort she spent in the data collection process. Thanks also to the teachers, the counselor, Mrs. Ansari, and the administrative officer, Wg. Cdr. P. Chakravarti, of The Air Force Golden Jubilee Institute, who participated in this study.

References

Bacon, E. H., & Schulz, J. B. . (1991). A survey of mainstreaming practices. Teacher Education and Special Education, 14, 144-149.

Berge, N.B., & Berge, Z.L. (1988). Integration of disabled students into regular classrooms in the United States and in Victoria, Australia. The Exceptional Child, 35, 107-117.

Bishop, V. E. (1986). Identifying the components of success in mainstreaming. Journal of Visual Impairment and Blindness, 80, 939-946.

Blackman, H. P. (1989). Special education placement: Is it what you know or where you live? Exceptional Children, 55, 459-462.

Brady, M. P., Swank, P. R., Taylor, R. D., & Freiberg, J. (1992). Teacher interactions in mainstream social studies and science classes. Exceptional Children, 58, 530-540.

Center, Y., & Ward, J. (1987). Teachers' attitudes towards the integration of disabled children into regular schools. The Exceptional Child, 34, 41-56.

Clark, E.A. (1976). Teacher attitude toward integration of children with handicaps. Education and Training of the Mentally Retarded, 11, 333-335.

Coates, R. D. (1989). The regular education initiative and opinions of regular classroom teachers. Journal of Learning Disabilities, 22, 532-536.

Fink, A., & Kosecoff, J. (1985). How to conduct surveys: A step-by-step guide. Newbury Park, CA: Sage Publications.

Fuchs, L.S., Fuchs, D., Hamlett, C.L., & Phillips, N.B. (1994). Classwide curriculum-based measurement: Helping general educators meet the challenge of student diversity. Exceptional Children, 60, 518-537.

Gans, K. D. (1985). Regular and special educators: Handicap integration attitudes and implications for consultants. Teacher Education and Special Education, 8, 188-197.

Gans, K. D. (1987). Willingness of regular and special educators to teach students with handicaps. Exceptional Children, 54, 41-45.

Garvar-Pinhas, A., & Schmelkin, L.P. (1989). Administrators' and teachers' attitudes toward mainstreaming. Remedial and Special Education, 10(4), 38-43.

Gickling, E. E., & Theobald, J. T. (1975). Mainstreaming: Affect or effect. The Journal of Special Education, 9, 317-328.

Hamre-Nietupski, S., McDonald, J., & Nietupski, J. (1994). Enhancing participation of a student with multiple disabilities in regular education. Teaching Exceptional Children, 26(3), 60-63.

Hasazi, S.B., Johnston, A.P., Liggett, A.M., & Schattman, R.A. (1994). A qualitative policy study of the least restrictive environment provision of the Individuals with Disabilities Education Act. Exceptional Children, 60, 491-507.

Hayes, K., & Gunn, P. (1988). Attitudes of parents and teachers toward mainstreaming. The Exceptional Child, 35, 31-39.

Horne, M.D. (1983). Attitudes of elementary classroom teachers toward mainstreaming. The Exceptional Child, 30, 93-97.

Kemple, K.M., Hartle, L.C., Correa, V.I., & Fox, L. (1994). Preparing teachers for inclusive education: The development of a unified teacher education program in early childhood and early childhood special education. Teacher Education and Special Education, 17, 38-51.

Larrivee, B., & Cook, L. (1979). Mainstreaming: A study of the variables affecting teacher attitude. The Journal of Special Education, 13, 315-324.

Leyser, Y. (1988). The impact of training in mainstreaming on teacher attitudes, management techniques, and the behavior of disabled students. The Exceptional Child, 35, 85-96.

Madden, N.A., & Slavin, R.E. (1983). Mainstreaming students with mild handicaps: Academic and social outcomes. Review of Educational Research, 53, 519-569.

McLeskey, J., & Pacchiano, D. (1994). Mainstreaming students with learning disabilities: Are we making progress? Exceptional Children, 60, 508-517.

Moore, D.S., & McCabe, G.P. (1993). Introduction to the practice of statistics. New York: W.H. Freeman & Co.

Myles, B. S., & Simpson, R. L. (1992). General educators' mainstreaming preferences that facilitate acceptance of students with behavioral disorders and learning disabilities. Behavioral Disorders, 17, 305-315.

Reynolds, B., & Reynolds, J. M. (1982). Elementary teacher's attitudes toward mainstreaming EMR students. Education and Training of the Mentally Retarded, October issue, 171-175.

Rojewski, J.W., & Pollard, R.R. (1993). A multivariate analysis of perceptions held by secondary academic teachers toward students with special needs. Teacher Education and Special Education, 16, 330-341.

Schmelkin, L.P. (1981). Teachers' and nonteachers' attitudes toward mainstreaming. Exceptional Children, 48, 42-47.

Schumm, J. S., & Vaughn, S. (1991). Making adaptations for mainstreamed students: General classroom teachers' perspectives. Remedial and Special Education, 12(4), 18-27.

Semmel, M.I., Abernathy, T. V., Butera, G., & Lesar, S. (1991). Teacher perceptions of the Regular Education initiative. Exceptional Children, 58(1), 9-24.

Shotel, J.R., Iano, R.P., & McGettigan, J.F. (1972). Teacher attitudes associated with the integration of handicapped children. Exceptional Children, 39, 677-683.

Stainback, S., Stainback, W., East, K., & Sapon-Shevin, M. (1994). A commentary on inclusion and the development of a positive self-identity by people with disabilities. Exceptional Children, 60, 486-490.

Stephens, T.M., & Braun, B.L. (1980). Measures of regular classroom teachers' attitudes toward handicapped children. Exceptional Children, 46, 292-294.

Wang, M. C., & Baker, E. T. (1985-86). Mainstreaming programs: Design features and effects. Journal of Special Education, 19, 503-521.

Wang, M. C., Vaughn, E. D., & Dytman, J. A. (1985). Staff development: A key ingredient of effective mainstreaming. Teaching Exceptional Children, 17(2), 112-121.

Whinnery, K.W., Fuchs, L.S., & Fuchs, D. (1991). General, special, and remedial teachers' acceptance of behavioral and instructional strategies for mainstreaming students with mild handicaps. Remedial and Special Education, 12(4), 6-17.

Williams, D. (1990). Listening to today's teachers: They can tell us what tomorrow's teachers should know. Teacher Education and Special Education, 13, 149-153.

Winzer, M., & Rose, C. (1986). Mainstreaming exceptional students: Use of the attitude survey with teachers in British Colombia. B. C. Journal of Special Education, 10, 309-319.

Wolery, M., Huffman, K., Holcombe, A., Martin, C.G., Brookfield, J., Schroeder, C., & Venn, M.L. (1994). Preschool mainstreaming: Perceptions of barriers and benefits by faculty in general early childhood education. Teacher Education and Special Education, 17, 1-9.

Ysseldyke, J.E., Thurlow, M.L., Wotruba, J.W., & Nania, P.A. (1988). Regular education teachers' perceptions of instructional arrangements for students with mild handicaps (Research Report No. 8). Minneapolis, MN: Minnesota University. (ERIC Document Reproduction Service No. ED 304 811)

Zigmond, N., &. Baker, J. (1990). Mainstream experiences for learning disabled students (Project MELD): Preliminary report. Exceptional Children, 57, 176-185.

Zigmond, N., Levin, E., & Laurie, T.E. (1985). Managing the mainstream: An analysis of teacher attitudes and student performance in mainstream high school programs. Journal of Learning Disabilities, 18, 5353-541.

APPENDIX

Table 1: Percentage of Respondents by Gender, Years of Teaching Experience, Qualification, and Grade Levels Taught (N=32)

Gender	Teaching Experience	Qualification	Grades
19% male 81% female	9%, 0-2 yrs. 19%, 3-5 yrs. 34%, 6-10 yrs. 38%, ≥ 11 yrs.	16% Bachelor's 53% Master's 6% > Master's < Ph.D 25% Diploma	22% elem. 31% sec. 19% high schl. 28% 7-12 Grades

Table 2: Teacher Attitudes Toward Mainstreaming (percentage of agreement)

Opinions Expressed	Physically Handicapped	Mentally Handicapped	Learning Disabled
Separate classes better	41%	85%	56%
General education will be beneficial	66%	19%	38%
General education classes will **not** benefit student	22%	72%	50%
Extra behavior problems likely if mainstreamed	34%	34%	41%
Mainstreaming will help life after school	81%	77%	81%
Willing to mainstream after training in special education	84%	66%	88%
Willing to mainstream immediately	47%	19%	19%
Willing to train for mainstreaming	22%	78%	63%
Undecided if willing to train for mainstreaming	56%	6%	22%
Respondents not sufficiently trained for students with special needs	44%	56%	31%
Special education will give teacher more confidence	16%	25%	53%
Undecided if special education will give teacher more confidence	84%	37%	38%

Table 3: Respondents' Estimation of Skills and Resources Required for Successful Mainstreaming (percentage of agreement)

Skills/Resources Required	Physically Handicapped	Mentally Handicapped	Learning Disabled
More teacher patience	81%	97%	97%
More teacher time	37%	62%	56%
Changes in classroom structure	53%	72%	66%
Special equipment	100%	100%	68%
Modification in teaching styles	72%	100%	97%
Curriculum adaptation	62%	94%	78%
Adaptation of grading policies	78%	94%	94%
Training in special education	75%	81%	66%
Administrative help	84%	84%	88%
Special education consultant	94%	100%	100%
More special educators in Delhi, India	41%	47%	53%